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#### REMARKS

Applicant notes that this Amendment is filed <u>prior to</u> filing Appellant's Appeal Brief, and is substantially identical to the Amendment filed herein on January 28, 2005. Applicant respectfully submits that the claim amendments included herein clearly do not raise new issues and serve to clarify the issues on appeal. Therefore, this Amendment should be entered.

Applicant gratefully acknowledges the participation in and comments provided by the Examiner and Primary Examiner Creighton Smith, during a personal interview conducted on January 25, 2005. Applicant notes that during the interview, Applicant discussed claim 1 (and the other independent claims) and pointed out that the cited references do not teach or suggest the features of the claimed invention. For example, Applicant pointed out that the claimed invention includes "retrieving the caller profile to construct a personalized IVR dialogue menu by performing a tree-based collapsing, and play out the personalized IVR dialogue menu via said telephone", as illustrated, for example, in Figures 7 and 8, and that the personalized menu in the claimed invention includes "a plurality of shortcut paths; and an option for changing said plurality of shortcut paths in said personalized IVR dialogue menu". These features are clearly not taught or suggested by the cited references.

This Amendment reinforces Applicant's points from the personal interview, and explains in greater detail how the cited references do not teach or suggest the claimed invention.

Claims 1-10 and 12-42 are all the claims presently pending in the application. Claims 1, 16, 26 and 28 have been amended to further define the claimed invention. Claim 11 has been canceled and its feature included (e.g., substantially included) in claims 1, 16, 26 and 28.

Claims 1-4, 6-8, 10-12, 15-26, 28-32 36, 37 and 42 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Polcyn, et al. (U.S. Patent No. 6,061,433). Claims 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Polcyn in view of Csaszar (U.S. Patent No. 5,970,124). Claims 5, 9 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Polcyn in view of Hanson (U.S. Patent No. 6,016,336). Claims 33-35 and 39-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Polcyn in view of Partridge (U.S. Patent No. 5,933,484).

Claim 38 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Polcyn in



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view of Csaszar, Partridge and Hanson. Claim 41 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Polcyn.

These rejections are respectfully traversed in the following discussion.

#### I. THE CLAIMED INVENTION

Applicant's invention, as disclosed and claimed (e.g., see independent claims 1 and 16), is directed to a method (and system) for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information. The claimed method includes storing a caller profile, accessing the IVR system via a telephone, and retrieving the caller profile to construct a personalized IVR dialogue menu and play out the personalized IVR dialogue menu via the telephone. The personalized IVR dialogue menu is at least one of based on a caller access pattern and configurable by the caller.

Importantly, the personalized menu is constructed by performing a tree-based collapsing. In addition, the personalized menu includes a plurality of shortcut paths, and an option for changing the plurality of shortcut paths in the personalized IVR dialogue menu.

Conventional IVR systems may include a menu which is intended to save a caller's time by allowing the caller to press "1" on a telephone keypad to play out several applications based on the caller's past usage. However, such systems do not deal with hierarchical (e.g., hierarchical tree) menus, but instead deal only with "flat" menus (e.g., menus without "intermediate" nodes for accessing information). Thus, such systems do not construct a personalized menu by performing a tree-based (e.g., hierarchical tree-based) collapsing.

In addition, such systems may include path (e.g., pressing the number "1" on a telephone keypad) which can be taken by a caller to access applications (e.g., savings account balance, checking account balance, etc.) more directly than an ordinary route (e.g., by a path provided in a standard menu). However, such IVR systems do not include a plurality of shortcut paths.

Moreover, such conventional systems may allow an option for changing the order of presentation of the applications reached by taking a certain path. However, this option is not related to changing a plurality of shortcut paths in the menu of such conventional systems.

Indeed, merely changing the order of presentation of applications does not change the "path" that

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the caller takes to get to those applications. That is, the caller will always take the same path (e.g., pressing the number "1" on a telephone keypad) to get to those applications. Stated another way, the caller may change the order of the applications played out to caller when the caller takes the shortcut path, but the path will always be the same (e.g., pressing the number "1" on a telephone keypad). Thus, such conventional methods/systems, therefore, lack convenience and sophistication (Application at page 11, lines 4-16).

The claimed invention, on the other hand, constructs a personalized menu by performing a tree-based collapsing (Application at Figures 7-8; page 15, line 9-page 17, line 10). That is, in the claimed invention, a hierarchical menu may be collapsed (e.g., by removing intermediate nodes) to construct the personalized menu.

In addition, the <u>personalized menu includes</u> a plurality of shortcut paths, and <u>an option for changing the plurality of shortcut paths in the personalized menu</u> (Application at Figures 4 and 5; page 11, lines 17-21).

For example, in the claimed invention, the menu played out to the caller may state "Press 1 to transfer fund balance by dollar amount, press 2 for account balance by fund" and so on. In this case, for example, the caller may take a first shortcut path (e.g., pressing the number "1" on a telephone keypad) to transfer fund balance, take a second shortcut path (e.g., pressing the number "2" on a telephone keypad) to access an account balance, and so on. These "paths" for accessing the information may be more direct that the paths provided ordinarily (e.g., provided in a default main menu). That is, unlike conventional systems, the claimed invention provides a menu which includes a plurality of shortcut paths.

Moreover, the menu in the claimed invention includes an option of changing the plurality of shortcut paths in the menu (e.g., to include different shortcut paths in the menu). Thus, for example, the menu played out to the caller my state "Press 7 to change your personalized menu". The caller may then press "7" on the telephone keypad to change the shortcut paths in the menu such as by adding shortcut paths to the menu or deleting shortcut paths from the menu (Application at page 14, lines 3-8).

These features allow the claimed invention is much more sophisticated, user friendly and flexible than conventional systems.

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#### II. THE PRIOR ART REFERENCES

#### A. The Polcyn Reference

The Examiner alleges that Polcyn teaches the claimed invention of claims 1-4, 6-8, 10-12, 15-26 and 28-32, 36, 37 and 42, and makes obvious the invention of claim 41. Applicant submits, however, that there are elements of the claimed invention that are neither taught or suggested by Polcyn.

However, Polcyn does not teach or suggest "retrieving the caller profile to construct a personalized IVR dialogue menu by performing a tree-based collapsing, and play out the personalized IVR dialogue menu via said telephone", or a personalized menu which includes "a plurality of shortcut paths; and an option for changing said plurality of shortcut paths in said personalized IVR dialogue menu" as recited in claim 1 and similarly recited in claims 16, 26 and 28. As noted above, these features allow the claimed invention is much more sophisticated, user friendly and flexible than conventional methods/systems (Application at Figures 4 and 6; page 11, lines 17-21).

Clearly, these novel features are not taught or suggested by Polcyn. The Examiner alleges that this feature (formerly recited in claim 11) is disclosed in Polcyn at column 6. However, nowhere does col. 6 in Polcyn teach or suggest a hierarchical tree menu, let alone constructing a personalized menu by "performing a tree-based collapsing".

Indeed, for the convenience of the Examiner, Applicant has prepared the attached flowchart (attached hereto as Exhibit 1 and incorporated herein by reference) which describes the system disclosed by Polcyn.

As illustrated in Exhibit 1, in Polcyn, a caller may be presented with an introductory menu which states "Press 1 to connect with your usual services, Press 2 for other selections" (Polcyn at col. 6, lines 59-61). Thus, by pressing "1" the caller will be directed to certain applications in an order which is based on caller's past usage. If the caller historically has accessed his checking account balance, then <u>afterwards</u>, accessed his savings account balance, if the caller presses "1" in the introductory menu, a second menu will be played out which may state "Your checking account balance is \$X, and your savings account balance is \$Y" (Polcyn at

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col. 6, lines 29-31).

Referring to Figure 3, Polcyn states that this second menu may also include "the option, step 345, of changing the **order of presentations**" (emphasis added) (Application at col. 6, lines 37-38). It is important to note that by "order of presentations", Polcyn means only the order of applications presented to the caller in the second menu (e.g., see col. 6, lines 24-29 which describes the "order" of presentation).

Thus, by selecting this option (e.g., step 345 in Figure 3) and changing the order, the next time the caller connects to the menu (e.g., by calling again), if the caller presses "1" in the introductory menu, the caller may hear the applications presented in a different order. For example, the caller may hear "Your savings account balance is \$Y, and your checking account balance is \$X".

Polcyn also teaches that the applications presented to the caller by pressing "1" in the introductory menu can be changed. Specifically, if the caller presses "2" in the introductory menu, a third menu (e.g., the standard menu) may be played out to the caller which includes "a long sequence of standard introductory messages as in FIG. 2" (Polcyn at col. 6, lines 61-64). This is intended by Polcyn to provide the ability "to determine a change in preferred applications by individual callers" (Polcyn at col. 6, lines 66-67).

[Applicant would point out to the Examiner that this passage makes clear that Polcyn does not provide a mechanism for allowing a caller to affirmatively change his preferences (e.g., by configuring the personalized menu as in the claimed invention), but instead only provides a mechanism to "determine a change" in the caller's preferences based on past usage].

Polcyn states that if a caller "continually presses 2" in response to the introductory menu and then selects the "mortgage rate" application, the caller's preferences (e.g., savings account balance) will eventually be replaced with the "mortgage rate" application (Polcyn at col. 7, lines 1-5). Similarly, if a caller "consistently" presses 1 in the second menu, and selects an additional application (e.g., a "CD rate" application), this additional application will eventually be added to the caller's preferences (Polcyn at col. 7, lines 6-16).

Thus, it is clear that <u>changing</u> the caller's preferences (e.g., the applications played out to the caller in the second menu) is extremely cumbersome in the Polcyn system. For example, to

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replace a "savings account" application with a "mortgage rate" application, the caller must continually press 2 in response to the introductory menu. Thus, the caller may have to continually call back, over and over again, maybe seven or eight times in a row, in order to replace the "savings account" application with the "mortgage rate" application.

[It is important to note, however, that merely changing these preferences does <u>not</u> change a "shortcut path" in the menu. Indeed, even after the caller changes his preferences as noted above, the "path" taken to get to the "mortgage rate" application is the same as the "path" taken to get to the "savings account" application (i.e., by pressing "1" in the introductory menu)].

In addition, Applicant respectfully submits that it is clearly evident that <u>adding</u> applications to the caller's preferences is extremely cumbersome in the Polcyn system. For example, to add a "CD rate" application to the caller's preferences, the caller must "consistently press 1 in response to the second menu (emphasis added) (Polcyn at col. 7, lines 6-16). Thus, the caller may have to consistently press 1, over and over again, maybe seven or eight times in a row, in order to add the "CD rate" application to his preferences.

[It is important to note, however, that merely adding preferences does <u>not</u> change a "shortcut path" in the menu. Indeed, even after the caller adds the preferences as noted above, the "path" taken to get to the additional "preferred" application is the same as the "path" taken to get to the other "preferred" applications (i.e., by pressing "1" in the introductory menu)].

Clearly, the cumbersome Polcyn system is completely unrelated to the claimed invention. Indeed, as noted above, the standard menu in the Polcyn system is "flat". That is, the applications are accessed directly from the standard menu without any intermediate steps (e.g., see applications 240, 245, 250 and 255 in Figure 2 of Polcyn). For example, if a caller pressed 1 in response to the standard menu in Polcyn, the caller would not be directed to another menu (e.g., an intermediate node) but would directly access the application. Thus, by constructing the second menu in which the caller's preferred applications (e.g., savings account balance, checking account balance, etc.) based on past usage are played out, Polcyn is not "performing a tree-based collapsing".

The claimed invention, on the other hand, constructs a personalized menu by performing a tree-based collapsing (Application at Figures 7-8; page 15, line 9-page 17, line 10). That is, in

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the claimed invention, a hierarchical menu may be collapsed (e.g., by removing intermediate nodes) to construct the personalized menu.

Indeed, as Applicant's undersigned representative pointed out to the Examiner and Examiner Smith in the personal interview conducted on January 25, 2005, in an exemplary embodiment (e.g., see Figures 7 and 8), the personalized menu may be constructed by performing a "tree-based collapsing" such that the menu includes a shortcut path to a node (e.g., any node, not merely a terminal node or application) which is more direct than an ordinary path (e.g., the path provided in a default menu). Thus, for example, as illustrated in Figures 7 and 8, whereas a standard menu may include a path a-b-c-d-e, the personalized menu may be constructed include a path a-c-e (Application at Figure 8; page 16, lines 3-6).

Polcyn, on the other hand, does not deal with hierarchical (e.g., hierarchical tree) menus, but instead deal only with "flat" menus (e.g., menus without "intermediate" nodes for accessing information). For example, as shown in attached Exhibit 1, the Standard Menu in Polcyn is flat. That is, if a caller presses any of the keys in response to the Standard Menu, the caller is taken directly to an application. The caller in Polcyn does not press a key in response to the Standard menu to get to a second submenu, then press another key to get to a third submenu and so forth (as illustrated in Figure 7 of the present Application) until he arrives at the application.

Thus, such even assuming (arguendo) that Polcyn constructs a personalized menu, Polcyn cannot construct a personalized menu <u>by performing a tree-based (e.g., hierarchical tree-based)</u> collapsing. Thus, Polcyn is completely unrelated to the claimed invention.

Further, unlike the cumbersome Polcyn system, the claimed invention provides a personalized menu which includes a plurality of shortcut paths.

Applicant notes that the term "shortcut" is defined as "a route more direct than the one ordinarily taken" (Webster's Universal Encyclopedic Dictionary, Barnes & Noble Books, page 1699 (2002)). Examples of "shortcut paths" are illustrated in the present Application in the "Personalized Main Menu" 402 in Figure 4 which includes "1 Transfer Fund Balance by Dollar Amount", "2 Account Balance by Fund" and so on.

For example, in the claimed invention, the menu played out to the caller may state "Press I to transfer fund balance by dollar amount, press 2 for account balance by fund" and so on. In

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this case, for example, the caller may take a first shortcut path (e.g., pressing the number "1" on a telephone keypad) to transfer fund balance, take a second shortcut path (e.g., pressing the number "2" on a telephone keypad) to access an account balance, and so on. These "paths" for accessing the information may be more direct that the paths provided ordinarily (e.g., provided in a default main menu).

Polcyn, on the other hand, teaches only one key that the caller may use to take a more direct route to an application than an ordinary route. Namely, as illustrated in the attached Exhibit 1, if the caller presses "1" in the main menu, the caller may be directed to his preferred applications without having to press another key. However, Applicant would point out that even assuming that this is a "shortcut", it is only a single shortcut, not a "plurality of shortcuts" as in the claimed invention. Moreover, nowhere is the caller provided with the option of changing the path. That is, the path will always be the same (e.g., pressing "1") and the result will be the same (e.g., savings and checking account balances will be played out) unless the caller "continually" or "consistently" calls back and requests different information, in which case the caller's preferred applications will be replaced or added to.

The Examiner in the personal interview on January 25, 2005 indicated that the option in the standard menu to "Press 4 for CD rate information" was a "shortcut. However, this is clearly not correct, since this path is no more direct than any other path for getting to the CD rate information.

Moreover, the menu in the claimed invention includes an option of changing the plurality of shortcut paths in the menu (e.g., to include different shortcut paths in the menu). Thus, for example, the menu played out to the caller my state "Press 7 to change your personalized menu". The caller may then press "7" on the telephone keypad to change the shortcut paths in the menu such as by adding shortcut paths to the menu or deleting shortcut paths from the menu (Application at page 14, lines 3-8).

Polcyn, on the other hand, may provide an option for changing the order of presentation of the applications reached by taking a certain path. However, this option is not related to changing a shortcut path in the menu. Indeed, merely changing the order of presentation of applications does not change the "path" that the caller takes to get to those applications. That is,

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the caller will always take the same path (e.g., pressing the number "1" on a telephone keypad) to get to those applications. Stated another way, the caller may change the order of the applications played out to caller when the caller takes the shortcut path, but the path will always be the same (e.g., pressing the number "1" on a telephone keypad). Thus, Polcyn clearly lacks the convenience and sophistication of the claimed invention.

Therefore, Applicant submits that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### B. The Csaszar Reference

The Examiner alleges that Polcyn would have been combined with Csaszar to form the claimed invention of claims 13-14. Applicant submits, however, that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Csaszar discloses a method of directed advertising. Specifically, the method uses a database having information which the consumer desires to know, a database having attributes of the consumer, and a database of advertising messages that an IVR system can deliver to the consumer in response to calls placed to the IVR system (Csaszar at Abstract).

However, <u>Csaszar is completely unrelated to an IVR system and is completely unrelated to Polcyn</u>. Hence, given the completely different fields of the references, there would have been no motivation to combine the references, <u>absent impermissible hindsight</u>.

Moreover, neither Polcyn, nor Csaszar nor any combination thereof teaches or suggests a personalize menu which includes "retrieving the caller profile to construct a personalized IVR dialogue menu by performing a tree-based collapsing, and play out the personalized IVR dialogue menu via said telephone", or a personalized menu which includes "a plurality of shortcut paths; and an option for changing said plurality of shortcut paths in said personalized IVR dialogue menu" as recited in claim 1 and similarly recited in claims 16, 26 and 28.

Clearly, this novel feature is not taught or suggested by Csaszar. Indeed, Applicant notes

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that the Examiner is merely relying on Csaszar as allegedly disclosing inserting an advertisement into the caller's personalized dialogue menu (which Applicant denies). In other words, the Examiner has not alleged that Csaszar teaches or suggests constructing a personalized menu by performing a tree-based collapsing, or a personalized IVR dialogue menu which includes a plurality of shortcut paths, and an option for changing the plurality of shortcut paths.

In fact, nowhere does Csaszar teach or suggest a personalized menu which includes an option for changing the personalized menu. Indeed, the system and method of Csaszar are completely different from that of the claimed invention. In fact, as noted above, Csaszar merely discloses a system and method for directed advertising, and is completely unrelated to an IVR system. Therefore, Csaszar fails to make up for the deficiencies of the Polcyn reference.

Therefore, Applicant submits that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### C. The Hanson Reference

The Examiner alleges that Polcyn would have been combined with Hanson to form the invention of claims 5, 9 and 27. Applicant submits, however, that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Specifically, neither Polcyn, nor Hanson, nor any combination thereof teaches or suggests a personalized menu which includes "retrieving the caller profile to construct a personalized IVR dialogue menu by performing a tree-based collapsing, and play out the personalized IVR dialogue menu via said telephone", or a personalized menu which includes "a plurality of shortcut paths; and an option for changing said plurality of shortcut paths in said personalized IVR dialogue menu" as recited in claim 1 and similarly recited in claims 16, 26 and 28.

Clearly, these novel features are not taught or suggested by Hanson. Indeed, Applicant respectfully notes that the Examiner is not relying on Hanson as allegedly disclosing this feature, but is merely relying on Hanson as allegedly teaching a shortcut based on a most-recently

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accessed IVR pattern.

Indeed, Hanson teaches that when the caller connects to the IVR system, he is merely presented with the option of receiving the full-length menu manuscript, or being connected in accordance with the caller's most recent previous choice (Hanson at col. 4, lines 1-54). Nowhere does Hanson teach that the caller is given an option at this point (e.g., when the call is initiated) to change his options. Thus, even assuming (arguendo) that being connected in accordance with the caller's most recent choice is somehow a part of a "menu", nowhere does that "menu" include the option of changing the "menu".

Thus, it is clear that Hanson does not even teach or suggest a personalized main menu as in the claimed invention, let alone a personalized main menu that includes a plurality of shortcut paths and an option for changing the plurality of shortcut paths. Further, nowhere does Hanson teach or suggest constructing a personalized menu by performing a tree-based collapsing as in the claimed invention.

Therefore, Applicant submits that these references would not have been combined and even if combined, the alleged combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### D. The Partridge Reference

The Examiner alleges that Polcyn would have been combined with Partridge to form the claimed invention of claims 33-35 and 39-40, and that Polcyn would have been combined with Csaszar, Partridge and Hanson to form the claimed invention of claim 38. Applicant submits, however, that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Partridge discloses a method of providing a menu to a subscriber on a switched telecommunications network (Partridge at Abstract).

Clearly, Partridge is completely unrelated to Polcyn and Hanson. Moreover, Applicant respectfully submits that the Examiner has provided insufficient motivation for combining the

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references as alleged by the Examiner.

Hence, given the completely different problems addressed by the references, let alone those to which the present invention aims to solve, and given the fundamentally different solutions offered by the references to address these disparate problems, there would have been no motivation to combine the references, absent impermissible hindsight.

Moreover, neither Partridge, Polcyn, nor any combination thereof, teaches or suggests a personalized menu which includes "retrieving the caller profile to construct a personalized IVR dialogue menu by performing a tree-based collapsing, and play out the personalized IVR dialogue menu via said telephone", or a personalized menu which includes "a plurality of shortcut paths; and an option for changing said plurality of shortcut paths in said personalized IVR dialogue menu" as recited in claim 1 and similarly recited in claims 16, 26 and 28.

Clearly, this novel feature is not taught or suggested by Partridge. Indeed, Applicant notes that the Examiner is merely relying on Partridge as allegedly disclosing an option for changing a personalized menu to include a selected shortcut.

In fact, nowhere does Partridge teach or suggest a personalized menu which includes an option for changing the personalized IVR dialogue menu. Certainly, Partridge does not teach or suggest constructing a personalized menu by performing a tree-based collapsing.

Indeed, the system and method of Partridge are completely different from that of the claimed invention. The Examiner attempts to rely on Figure 3 in Partridge to support his position. However, the Examiner is clearly incorrect.

Indeed, Partridge discloses that step 300 in Figure 3 may include a menu modification option (Partridge at col. 5, lines 50-62). However, this option merely allows adding or deleting in step 340 service options from the menu. That is, the menu is clearly not a personalized IVR menu and clearly does not include a plurality of shortcut paths, so the "menu modification option" certainly has nothing to do with changing the plurality of shortcut paths (e.g., the content of the menu) in the menu.

Therefore, Applicant submits that these references would not have been combined as alleged by the Examiner and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to

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withdraw this rejection.

## III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-10 and 12-42, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a <u>telephonic or personal interview</u>.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted.

Date: 4/15/05

Customer No. 21254

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### **CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that the foregoing Response was filed by facsimile with the United States Patent and Trademark Office, Examiner Olisa Anwah, Group Art Unit # 2645 at fax number (703) 872-9306 this 15<sup>th</sup> day of April, 2005

Phillip E. Miller, Esq. Reg. No. 46,060

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